

International University of Information Technologies
Faculty of Information Systems and Mathematical Modeling
Kazakhstan, Almaty, 2012

Objective C Programming course

Syllabus

Instructor

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Homepage <http://freetonik.com>

Course homepage <http://wikistan.ru/blog/macosdev/>

Office hours

Monday, 11:00am – 11:50am

Thursday, 12:00pm – 12:50pm

Course description

This course covers the essentials of Objective C programming language, the Foundation and Cocoa frameworks. The main objective of the course is to teach students design and build rich and powerful applications for Mac OS X using Objective C, XCode and other tools.

Prerequisites

Basic knowledge of computer science, object oriented programming, C++ and/or Java programming languages is required for this course.

Post requisites

Finishing this course allows you to continue studying in the Apple development stream at IITU and start iOS programming course next semester. Advanced Mac OS/iOS course will be available upon receiving a passing grade on both Objective C and iOS courses.

Course outline

Week **1**. Introduction to Objective C programming language. XCode.

Week **2**. From C/C++/Java to Objective C. Assignment 1.

Week **3**. Frameworks. Quiz 1.

Week **4**. Core data.

Week **5**. Foundation Framework. Assignment 2.

Week **6**. Design patterns. Quiz 2.

Week **7**. Cocoa framework. Debugging Cocoa.

Week **8**. Helper objects and delegates. Assignment 3.

Midterm exam.

Week **9**. App design. Quiz 3.

Week **10**. Notifications. Custom views.

Week **11**. Keyboard and mouse events. Drag and drop. Assignment 4.

Week **12**. Timers. Sheets. Formatters. Quiz 4.

Week **13**. Web services.

Week **14**. Cocoa Touch overview.

Week **15**. Overview. Final exam preparation.

Weeks **16-17**. Final exam.

Lectures

Lectures in this course are distributed electronically in the form of video presentations via YouTube and iTunes. There will be 15 lectures 50 minutes each.

Lab work

In the lab you will work on exercises and small projects using the knowledge you obtain in the lectures. There will be one 100 minutes long lab each week. Each lab is tightly connected to the topic of the last lecture.

Programming assignments

There will be four programming projects for you to complete. You are to write programs using the knowledge obtained from the lectures. Assignments are marked individually. Each assignment is due when the next one is published.

Written quizzes

There will be two quizzes in the first part of the semester and two more in the second part. Quizzes cover the topics of previous lectures and conducted in the form of written exercises and multiple-choice tests.

Midterm exam

Midterm exam covers all the topics preceding the exam and will be conducted in the form of multiple-choice exam.

Final exam

Final exam covers all the topics in the course and will be conducted in the form of multiple-choice exam. No answers will be published.

Office hours

You can ask any questions during office hours or any time via email or Skype. You are also encouraged to use the course weblog <http://wikistan.ru/blog/macosedev/> to connect to your peers, ask and answer questions, share your knowledge and experience, discuss any matters related to the course.

Policy

Late submission. No late submission is possible unless proper certified medical or personal proof of inability to submit work on time is presented.

Plagiarism. **Zero tolerance policy for plagiarism!** Students accused of plagiarism for the first time will receive 0 points (both the source and receivers of work) in the current exam or project. Reoccurring incidents will result in F mark for the course and academic investigation with university administration.

Grading scheme

Lab work	15 labs, 1 point each	15 points
Programming assignments	4 projects, 5 points each	20 points
Written quizzes	4 quizzes, 3.75 points each	15 points
Midterm exam	8 th week of classes	10 points
Final exam	end of the course	40 points
Total		100 points

Your grades will be calculated using the following scale:

A	4,0	95-100	Perfect
A-	3,67	90-94	
B+	3,33	85-89	Good
B	3,0	80-84	
B-	2,67	75-79	
C+	2,33	70-74	Good enough
C	2,0	65-69	
C-	1,67	60-64	
D+	1,33	55-59	
D	1,0	50-54	
F	0	30-49	Unsatisfactory
Z	0	0-29	

Reading

Books are not required in this course, as class materials (presentations, videos, lecture notes etc.) will be provided and generally expected to be sufficient for meeting the objectives of the course. Nevertheless, you are welcome to take the book [1] from the IITU library.

[1]. Programming in Objective C, Fourth edition by Stephen G. Kochan. Addison-Wesley, ISBN-13: 978-0-321-81190-5 ISBN-10: 0-321-81190-9

[2]. (Optional) Cocoa Programming for Mac OS X, Third edition, by Aaron Hillegass. ISBN-10: 0321503619 | ISBN-13: 978-0321503619